IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/605,172	Confirmation No.: 2171
Applicant(s):	Ivan N. Wakefield	
Filed:	09/12/2003	
Art Unit:	2622	
Examiner:	Tuan H. Le	
Title:	METHOD AND DEVICE FOR COMMUNICATION USING AND OPTICAL SENSOR	

Docket No.: PU03 0031US1.45
Customer No.: 54,494

Mailstop: AF
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF

I. Real Party in Interest

Sony Ericsson Mobile Communications AB is the real party in interest.

II. Related Appeals and Interferences

There are no other appeals or interferences, known to the Appellants, or Appellants' legal representatives, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

III. Status of Claims

The pending claims in the present application includes Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59, including independent Claims 1, 17, 32 and 48. Claims 4, 6, 14, 25, 39 and 53 have been cancelled. Claims 26-31 and 43-47 have been withdrawn.

Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 stand rejected by the Final Office Action dated April 29, 2010. The rejections in the Final Office Action dated April 29, 2010, of Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 are being appealed herein.

IV. Status of Amendments

There were no amendments filed after the Final Office Action dated April 29, 2010. Applicants chose to proceed directly with this appeal. All previous amendments filed by Applicants have been entered.

V. Summary of Claimed Subject Matter

As described in the Background of the present application, wireless communication devices, such as cellular telephones and the like are becoming feature-rich devices. Many of the latest cellular telephone models can surf the Internet, transmit and receive data including emails, text messages and the like in addition to normal voice communications. One of the latest features to be associated with or incorporated into wireless communication devices, cellular telephones and the like are digital cameras. These cameras can be built into the communication device or may be a separate module that can be electrically coupled to the communication device. A camera-equipped communication device that also has Internet and email capability can capture images and transmit such images via the Internet, email or via other media. Digital cameras or optical sensors associated with a communication device provide a way to communicate with the communication device or cell phone optically in addition to wired and wireless means, such as infrared (IR) and radio frequency (RF). IR and RF communication, such as Bluetooth, Wireless Fidelity (WiFi) and the like; however, each require an active transmitting device that is operated in real-time and requires that the communication device be within range. Additionally, the interoperability between the camera, the device's processor and the IR and RF systems has not been developed in order to provide a convenient and effective user experience.

The present invention addresses the above problems. The present invention is directed to a communications device equipped with an optical sensor, such as a cell phone having an

integrated camera. The communications device allows a user to take an image of data, such as an email address, phone number, a bar code, access information to a web site, a sequence of commands, information associated with a product or service and the like. The data is then identified by the communications device as a specific class of data (e.g., an email address, sequence of commands, etc.) and based on the identification of the class of data an associated function is performed by the communications device. Examples of the predetermined, associated functions that may be performed by the communication device in response to identifying or selecting the class of data includes: sending an email message; ordering a product or service; decoding data from one or more images to reprogram the communication device; downloading communication device setup parameters; storing one or more phone numbers; establishing a call or other communications; storing information associated with a web site or email address; accessing a web site; and similar operations.

Claims 1, 17, 32 and 48 are independent claims that stand rejected under the same art. Claim 1 is an independent device claim according to one embodiment of the present invention. The first element of Claim 1 is directed to "an optical sensor to capture an image, the image comprising a class of data embedded in the image, and the class of data having an associated predetermined function and comprising at least one of characters and numbers." This element is shown by elements 130, 204, 304, and 404 of Figures 1B, 2, 3A and 4A, respectively, and discussed at paragraphs [0021]-[0022] of the originally-filed specification. The second element of Claim 1 is directed to "a processor configured to identify the class of data in the image from a plurality of possible classes of data and automatically perform the associated predetermined function in response to the class of data being identified." This element is shown as element 112 of Figure 1A; elements 206 and 208 of Figure 2; elements 308 and 334 of Figure 3; and elements 408-416 of Figure 4A; and discussed in the originally-filed specification at paragraphs [0030]-[0037].

Claim 17 is an independent device claim according to another embodiment of the present invention. The first element of Claim 17 is directed to "an optical sensor to capture an image, the image comprising a class of data embedded in the image, the class of data having an associated

predetermined function and comprising at least one of characters and numbers." This element is shown by elements 130, 204, 304, and 404 of Figures 1B, 2, 3A and 4A, respectively, and discussed at paragraphs [0021]-[0022] of the originally-filed specification. The second element of Claim 17 is directed to "a processor, wherein a data structure operable in association with one of the optical sensor, the processor and a mobile system includes computer-executable instructions to identify the class of data from a plurality of possible classes of data in the image by decoding and analyzing pixels in the image." This element of Claim 17 is represented by elements 112, 206, 308, and 408 of Figures 1A, 2, 3 and 4A, respectively, and discussed in the originally-filed specification at paragraphs [0030]-[0037]. The third element of Claim 17 recites "another data structure operable in association with the processor to automatically perform the predetermined function associated with the class of data in response to the class of data being identified in the image." This element is supported by the specification at elements 208, 334 and 410-416 of Figures 2, 3 and 4, respectively, and discussed in the specification at paragraphs [0030]-[0037]. The fourth element of Claim 17 is directed to "a transmitter to transmit signals in response to the class of data." This feature is supported by the present application at element 120 of Figure 1A and discussed at least at paragraph [0018].

Claim 32 is an independent method claim. The first element of Claim 32 recites "capturing an image, the image comprising a class of data comprising at least one of characters and numbers embedded in the image." This element is shown in elements 130, 204, 304, and 404 of Figures 1B, 2, 3A and 4A, respectively, and discussed at paragraphs [0021]-[0022] of the originally-filed specification. The second element of Claim 32 is directed to "identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image, the class of data having an associated predetermined function." This element is shown as elements 112, 206, 308, and 408 of Figures 1A, 2, 3 and 4A, respectively, and discussed in the originally-filed specification at paragraphs [0030]-[0037]. The third element of Claim 32 is directed to "automatically performing a predetermined function associated with the class data in response to the class of data being identified in the image." This element is supported by the

specification at elements 208, 334 and 410-416 of Figures 2, 3 and 4, respectively, and discussed in the specification at paragraphs [0030]-[0037].

Claim 48 is an independent claim directed to a computer-readable storage medium having computer-executable instructions for performing a method according to one embodiment of the present invention. The computer-readable medium is discussed in paragraph [0039] and illustrated as element 128 of Figure 1B. The first element of Claim 48 recites "capturing an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers." This element is shown in elements 130, 204, 304, and 404 of Figures 1B, 2, 3A and 4A, respectively, and discussed at paragraphs [0021]-[0022] of the originally-filed specification. The second element of Claim 48 is directed to "identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image." This element is shown as elements 112, 206, 308, and 408 of Figures 1A, 2, 3 and 4A, respectively, and discussed in the originally-filed specification at paragraphs [0030]-[0037]. The third element of Claim 48 is directed to "automatically performing a predetermined function associated with the class of data in response to the class of data being identified in the image, each of the plurality of possible classes of data having an associated predetermined function." This element is supported by the Figures at elements 208, 334 and 410-416 of Figures 2, 3 and 4, respectively, and discussed in the specification at paragraphs [0030]-[0037].

VI. Grounds of Rejection to be Reviewed on Appeal

Whether Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 are anticipated under 35 U.S.C. § 102(e) over U. S. Patent Application Publication No. 2003/0076408 to Dutta ("Dutta") such that each and every feature of these claims are disclosed by Dutta.

VII. Arguments

1.   Prior Art

The Dutta patent is directed to a method for "scanning an image and/or taking a picture under low light conditions." See Dutta at paragraph [0002]. Dutta provides for reconstruction of an image to remove distortions in the image caused by motion of a handheld device and/or the low lighting conditions, as discussed in Dutta's Summary of the Invention section. This concept is illustrated in Figures 4 and 6 of Dutta.

Further, as discussed in paragraph [0023] of Dutta, Dutta discloses that data from an image can be selected by the user and then, upon request by the user, converted to text using optical character recognition and that a user can then store the converted text/characters into a database for later use.

2.   Legal Precedent

The basic requirement of a *prima facie* case of anticipation under 35 U.S.C. §102(e) is that *each and every* element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *See* MPEP §2131.

3.   Application of Legal Precedent to Final Rejections

   A.   *35 U.S.C. §102(e)Rejection of Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59*

As stated above, all pending claims, including independent Claims 1, 17, 32 and 48, were rejected as anticipated by Dutta. Appellant respectfully submits that each and every element of independent Claims 1, 17, 32, and 48, is not disclosed by Dutta.

Independent Claim 1 recites:

> "an optical sensor to capture an image . . . comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers, and
> a processor configured to *identify the class of data in the image from a plurality of possible classes of data* and automatically perform the associated predetermined function *in*

response to the class of data being identified." (Emphasis provided)

Independent Claim 17 recites:

"an optical sensor to capture an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers;

a processor . . . to *identify the class of data from a plurality of possible classes of data in the image by decoding and analyzing pixels in the image*;

another data structure operable in association with the processor to automatically perform the predetermined function associated with the class of data *in response to the class of data being identified in the image.*" (Emphasis provided)

Independent Claim 32 recites:

capturing an image, the image comprising a class of data comprising at least one of characters and numbers embedded in the image;

identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image, the class of data having an associated predetermined function; and

automatically performing a predetermined function associated with the class data *in response to the class of data being identified in the image.*" (Emphasis provided)

Independent Claim 48 recites:

"capturing an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers;

identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image; and

automatically performing a predetermined function associated with the class of data *in response to the class of data being identified in the image*, each of the plurality of possible

classes of data having an associated predetermined function."
(Emphasis provided)

In rejecting the independent claims of the present application, paragraphs [0021] and [0023] and Figure 3 of Dutta were cited. Paragraphs [0021] and [0023] of Dutta recite:

"[0021] The processing engine 304 coordinates the actions of the micro camera module 204, access to the memory 306, and processes the images obtained in accordance with measurements taken by the motion sensors 314X, 314Y, 314Z for ultimate display by the display (which may be integral to the handheld device or remote therefrom), for storage in a local or remote database, or for transmittal elsewhere, all of which are discussed in more detail below. A suitable processing engine would include some kind of central processing unit capable of processing data and software programs.

...

[0023] The reconstructed image is then displayed on the display of the handheld device, transmitted to a separate display connected to the handheld device (either through a local wire connection to a local display or through a connection through a network or through the internet to a remote display), or transmitted wirelessly to a local or remote display device or storage medium. *Alternatively, or in addition, the reconstructed image may be stored locally or remotely as an image or converted from an image into text, etc., by an optical character recognition (OCR) program. The text may then be added to an appropriate local or remote database, such as a list of telephone numbers, internet addresses (URLs), e-mail addresses, names, etc., which can later be accessed by the handheld device or another device to initiate a telephone call, browse the Internet, send an e-mail message, etc.*" (Emphasis provided).

Accordingly, Dutta discloses that the reconstructed image may be converted into text, which then may be added to an appropriate database. Dutta does not disclose "a processor configured to *identify the class of data* in the image from a plurality of possible classes of data . . . ." The Final Office Action suggests that such claimed feature is disclosed by the following portion of Dutta: "[t]he text may then be added to an *appropriate* local or remote database" (emphasis provided). However, this excerpt from Dutta does not teach or disclose "a processor configured to *identify the class of data* in the image . . . ." While the Office Action appears to be focusing on the term "appropriate" in asserting that the the specific recitation of

Claim 1 is taught by Dutta, the Office Action fails to appreciate that Dutta is, at best, focused on processing one class of data, i.e., textual data generally, and, thus, does not disclose discriminating between a plurality of classes of data (textual or otherwise) prior to the step of performing the predetermined function. In this regard, Dutta does not disclose identifying what class of data the extracted text belongs to, much less indentifying the class of text among a plurality of classes. The single sentence of Dutta that states that the extracted text can be added to an "appropriate" database does not teach or disclose "a processor configured to *identify the class of data* in the image from a plurality of possible classes of data . . . ." The invention of Dutta is merely extracting the textual characters from an image so that the textual characters can be stored in a database, as subsequently instructed by the user.

Further, there is no disclosure in Dutta of performing an associated predetermined function "*in response to* the class of data being identified," as recited in the independent claims of the present application. As discussed above, Dutta does not disclose a processor configured for *identifying the class of data* of the extracted text. It therefore follows that Dutta also does not disclose performing a predetermined function "*in response to*" such identification. For example, the present invention allows one with a mobile phone camera to take a picture of an email address, allow the mobile phone processor to identify that the image contains a email address (i.e., the class of data) and have the mobile phone compose an email in response to identifying that the user took a picture of the email address. Dutta does not realize this functionality in that Dutta is merely directed to extracting text characters from an image without regard to what class of data the characters belong.

In support of the Examiner's position, Figure 3 of Dutta was cited. Figure 3 illustrates a processing device that outputs an "image to display." However, there is no disclosure in Figure 3 or the related discussion in Dutta of a processor configured to identify the class of data in the image from a plurality of possible classes of data and performing the associated predetermined function in response to the class of data being identified. Additionally, it is noted that Figure 5 of Dutta was also cited in rejecting the independent claims. Yet, Figure 5 of Dutta illustrates a general optical character recognition (OCR) of text in an image. Still, there is no disclosure in any

portion of Dutta of a processor configured to *identify the class of data* in the image from a plurality of possible classes of data and performing the associated predetermined function *in response to the class of data being identified.*" The processor of Dutta performs a single functions regardless of the class of data and does not actually identify what class of data the characters belongs to, much less identify the text and performing a function associated with that identified class in response thereto.

For at least the reasons discussed above, it is submitted that the invention as recited in independent Claims 1, 17, 32 and 48 are patentably distinguishable over Dutta and that the Office's burden of establishing a *prima facie* case of anticipation has not been met. All other claims are dependent from independent Claims 1, 17, 32 and 48 and are patentable over Dutta for the same reasons each respective base independent claim is patentable. Appellant therefore submits that the rejection under 35 U.S.C. §102(e) of Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 is improper and should be reversed.

* * * * *

<div align="center">Conclusion</div>

For at least the above reasons, the Examiner has failed to show that each and every element of independent Claims 1, 17, 32 and 48 is present in the art cited. Applicants believe the claims are patentable distinguishable over the cited reference. Therefore, Applicants respectfully submit that Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 are in condition for allowance. Accordingly, reversal of the rejection of Claims 1-3, 5, 7-13, 15-24, 32-38, 40-42, 48-52 and 54-59 is respectfully requested.

Respectfully submitted,

Date: 11/30/10   By: _____
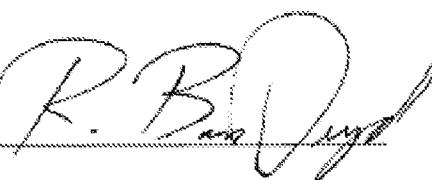
R. Brian Drozd
Reg. No. 55,130

Moore & Van Allen, PLLC
P.O. Box 13706
Research Triangle Park, NC 27709
Telephone: (919) 286-8000
Facsimile: (919) 286-8199

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON November 30, 2010.

VIII. Claims Appendix

The following is a clean copy of the claims involved in this appeal.

1. A device for communication, comprising:

an optical sensor to capture an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers; and

a processor configured to identify the class of data in the image from a plurality of possible classes of data and automatically perform the associated predetermined function in response to the class of data being identified.

2. The device of claim 1, wherein the optical sensor comprises one of a charge coupled device, a complimentary metal oxide semiconductor (CMOS) and a camera.

3. The device of claim 1, further comprising a data structure including computer-executable instructions executable by one of the optical sensor and the processor to decode pixels in the image to identify or select the associated class of data.

4. (Canceled)

5. The device of claim 1, further comprising a display to display at least one of the image and the class of data.

6. (Canceled)

7. The device of claim 1, wherein the plurality of possible classes of data comprise at least one of a phone number, a list of phone numbers, access information to a web site, a sequence of commands, and information associated with a product or service.

8. The device of claim 7, wherein the sequence of commands comprises commands to be performed automatically by a communication device.

9. The device of claim 8, wherein the communication device comprises a cellular telephone.

10. The device of claim 7, wherein the sequence of commands comprises commands to be performed by a communication device in response to a password.

11. The device of claim 10, wherein the communication device comprises a cellular telephone.

12. The device of claim 10, further comprising at least one of a user interface and a voice recognition function to enter the password.

13. The device of claim 1, wherein the optical sensor is operable to capture the image from one of a television, a video monitor, and a fixed medium.

14. (Canceled)

15. The device of claim 1, wherein transmitting a signal to order a product or service comprises sending one of a short message service (SMS) message, email message, or voice or data message, each including information associated with a purchaser.

16. The device of claim 1, further comprising a user interface to at least one of select the class of data from the image, edit the class of data, store the class data and transmit the class of data.

17. A device for communication, comprising:

an optical sensor to capture an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers;

a processor, wherein a data structure operable in association with one of the optical sensor, the processor and a mobile system includes computer-executable instructions to identify the class of data from a plurality of possible classes of data in the image by decoding and analyzing pixels in the image;

another data structure operable in association with the processor to automatically perform the predetermined function associated with the class of data in response to the class of data being identified in the image; and

a transmitter to transmit signals in response to the class of data.

18. The device of claim 17, wherein the data structure operable in association with one of the optical sensor, the processor and the mobile system includes computer-executable instructions executable by one of the optical sensor, the processor and the mobile system to decode pixels in the image to identify or select the class of data.

19. The device of claim 17, further comprising a storage device to store at least one of the image and the class of data.

20. The device of claim 17, further comprising a display to display at least one of the image and the class of data.

21. The device of claim 20, further comprising at least one function button to select the class of data from the image.

22. The device of claim 21, further comprising a pointing device to select the class data from the image.

23. The device of claim 17, further comprising a user interface to at least one of select the class data from the image, edit the class of data, store the class of data and transmit the class of data.

24. The device of claim 17, wherein the class of data comprises at least one of a phone number, a list of phone numbers, access information to a web site, a sequence of commands, and information associated with a product or service.

32. A method for communication, comprising:

capturing an image, the image comprising a class of data comprising at least one of characters and numbers embedded in the image;

identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image, the class of data having an associated predetermined function; and

automatically performing a predetermined function associated with the class data in response to the class of data being identified in the image.

33. The method of claim 32, further comprising decoding pixels in the image to identify or select the class of data.

34. The method of claim 32, further comprising displaying at least one of the image and the class of data.

35. The method of claim 32, wherein identifying or selecting the class of data comprises identifying at least one of a phone number, a list of phone numbers, a bar code, access information to a web site, a sequence of commands, and information associated with a product or service.

36. The method of claim 35, further comprising performing the sequence of commands automatically.

37. The method of claim 35, further comprising performing the sequence of commands in response to a password.

38. The method of claim 35, further comprising receiving the password via at least one of a voice recognition system and a user interface.

39. (Canceled)

40. The method of claim 32, wherein transmitting a signal to order a product or service comprises sending one of a short message service (SMS) message, an email message, or a voice or data message, each including information associated with a purchaser.

41. The method of claim 32, further comprising retrieving purchaser information from a data source in response to transmitting a signal to order a product or service.

42. The method of claim 32, further comprising at least one of selecting the class of data from the image, editing the class of data, storing the class of data and transmitting the class of data.

43. (Withdrawn) A method for communication, comprising:
    receiving an acoustic signal;
    identifying or selecting a class of data from the acoustic signal; and
    performing a predetermined function in response to the class of data.

44.   (Withdrawn)   The method of claim 43, wherein identifying or selecting the class of data comprises identifying at least one of a phone number, a list of phone numbers, a bar code, access information to a web site, a sequence of commands, and information associated with a product or service.45.   The method of claim 44, further comprising performing the sequence of commands automatically.

46.   (Withdrawn) The method of claim 44, further comprising performing the sequence of commands in response to a password.

47.   (Withdrawn)   The method of claim 43, wherein performing the predetermined function comprises one of transmitting a signal to order a product or service, decoding data from one or more images to reprogram a communication device, downloading communication device setup parameters, storing one or more phone numbers, storing information associated with a web site or email address, establishing a phone call, accessing a web site and sending an email message.

48.   A computer-readable storage medium having computer-executable instructions, when executed on a computer, allows the computer to perform a method, the method comprising:

capturing an image, the image comprising a class of data embedded in the image, the class of data having an associated predetermined function and comprising at least one of characters and numbers;

identifying a class of data in the image of a plurality of possible classes of data by decoding and analyzing pixels in the image; and

automatically performing a predetermined function associated with the class of data in response to the class of data being identified in the image, each of the plurality of possible classes of data having an associated predetermined function.

49.   The computer-readable storage medium having computer-executable instructions for performing the method of claim 48, further comprising decoding pixels in the image to identify or select the class of data.

50.   The computer-readable storage medium having computer-executable instructions for performing the method of claim 48, wherein identifying or selecting the class of data comprises identifying at least one of a phone number, a list of phone numbers, a bar code, access information to a web site, a sequence of commands, and information associated with a product or service.

51.   The computer-readable storage medium having computer-executable instructions for performing the method of claim 50, further comprising performing the sequence of commands automatically.

52.   The computer-readable storage medium having computer-executable instructions for performing the method of claim 50, further comprising performing the sequence of commands in response to a password.

53. (Canceled)

54.   The computer-readable storage medium having computer-executable instructions for performing the method of claim 48, wherein transmitting a signal to order a product or service comprises sending one of a short message service (SMS) message, an email message, or a voice or data message, each including information associated with a purchaser.

55. The device of claim 1, wherein the class of data comprises data that is visible and comprehensible to a human eye.

56. The device of claim 1, wherein the predetermined function comprises one of transmitting a signal to order a product or service, decoding data from one or more images to reprogram a communication device, downloading communication device setup parameters, storing one or more phone numbers, establishing a call, storing information associated with a web site or email address, accessing a web site, and sending an email message.

57. The device of claim 17, wherein the predetermined function comprises one of transmitting a signal to order a product or service, decoding data from one or more images to reprogram a communication device, downloading communication device setup parameters, storing one or more phone numbers, establishing communications, storing information associated with a web site or email address, accessing a web site, and sending an email message.

58. The method of claim 32, wherein performing the predetermined function comprises one of transmitting a signal to order a product or service, decoding data from one or more images to reprogram a communication device, downloading communication device setup parameters, storing one or more phone numbers, storing information associated with a web site or email address, establishing a phone call, accessing a web site and sending an email message.

59. The computer-readable medium having computer-executable instructions for performing the method of claim 48, wherein performing the predetermined function comprises performing commands contained in the image.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None